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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,556	04/19/2004	Chan Hwang	8028-43 (SPX200304-0016US)	3434
22150	7590	10/04/2007	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			ROSASCO, STEPHEN D	
			ART UNIT	PAPER NUMBER
			1756	
			MAIL DATE	DELIVERY MODE
			10/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/827,556

**Applicant(s)**

HWANG ET AL.

**Examiner**

Stephen Rosasco

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

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### Detailed Action

In response to the Amendment of 7/5/07, wherein the independent claims were amended to include the limitation "wherein the at least one through hole has a size smaller than a distance between the light-shielding patterns", the examiner withdraws the previous office action rejections and includes new rejections here over newly cited art, which were necessitated by amendment, and makes the action Final.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierrat (5,935,734) in view of Kawashima (6,991,896).

The claimed invention is directed to a photomask comprising a plurality of light-shielding patterns aligned over a transparent substrate in two dimensions, each of the light-shielding patterns having length and width measurements that differ from each other; and at least one through hole penetrating a predetermined region of each of the light-shielding patterns to expose the transparent substrate.

And wherein the plurality of light-shielding patterns, aligned in two dimensions, have equal length and width measurements.

And wherein longitudinal axes of the light-shielding patterns having equal length and width measurements are in parallel.

The teachings of Pierrat or Kim differ from those of the applicant in that the applicant teaches the plurality of light-shielding patterns, aligned in two dimensions, have equal length and width measurements, and are in parallel.

Pierrat teaches a mask method of fabricating a photomask comprising patterning a first layer of photoresist over a layer of opaque material on a photomask substrate, and then etching the layer of opaque material through the openings in the first layer of photoresist to create corresponding openings in the layer of opaque material.

The teachings of Pierrat differ from those of the applicant in that the applicant teaches the limitation wherein the at least one through hole has a size smaller than a distance between the light-shielding patterns.

Kawashima disclose (see claims) a mask that arranges a contact-hole pattern and a pattern smaller than the contact-hole pattern; and illuminating the mask by using an effective light source so as to resolve the contact-hole pattern and restrain the smaller pattern from resolving on an object to be exposed via a projection optical system.

Kawashima also teaches a mask that arranges a contact-hole pattern and a pattern smaller than the contact-hole pattern, and illuminating the mask using plural kinds of light so as to resolve the contact-hole pattern and restrain the smaller pattern from resolving.

Kawashima teaches how to adjust the contact hole pattern during exposure in order to project the desired image.

Also the limitation - that at least one through hole has a size smaller than a distance between the light-shielding patterns - would be considered almost

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inevitable in that the hole size would be expected to be smaller than the distance between patterns, which are much larger than the holes that are in the patterns.

It would have been obvious to one having ordinary skill in the art to take the teachings of Pierrat and combine them with the teachings of Kawashima in order to make the claimed invention because as Kawashima amply teaches how to adjust the hole size for the desired image results including a hole with a size smaller than a distance between the light-shielding patterns.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Stephen Rosasco whose telephone number is (571) 272-1389. The Examiner can normally be reached Monday-Friday, from 8:00 AM to 4:30 PM. The Examiner's supervisor, Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'S. Rosasco', with a stylized, sweeping flourish extending from the left side.

S. Rosasco  
Primary Examiner  
Art Unit 1756

S. Rosasco  
09/28/07